

Structure Research of Endogenous Ore-Fields and
Deposits

30-58-4-6/44

tasks of the structure research of endogenous deposits exist in reconstructing the history of the geological development of ore-containing fields and in the determination of the influence of tectonic perturbations and of the composition of rock upon the spatial distribution and form of the ore-fields in ore-containing territories, fields and deposits. The main research method exists in compiling detailed geological maps of ore-containing territories at a scale of 1:50000 - 1:100000, ore-fields 1:5000 - 1:10000, and single deposits 1:1000 - 1:2000 with great use of subterranean data (1:200 - 1:500) and detailed sketches (1:25 - 1:100). The author points out that at present ore-fields of great deposits do not have detailed geologic maps. The works on the field of modelling tectonic processes are at present still in an early stage. The researches want greater application of geologists, operating- and economics experts. In the next years all remainders in this fields should be worked up by considering geophysical research methods as far as possible. The research works in the

Card 3/4

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30-58-4-6/44

field of the modelling of tectonic deformations should be organized in the geological institutes of the Academy of Sciences of the USSR as well as in the Academy of Sciences of the Union Republics. These researches systematically carried on, allow to rationalize the search- and prospecting works and to increase their effectivity.

: 1. Geophysical prospecting—USSR

Card 4/4

VOL'FSON, F.I.; LUKIN, L.I., red.; SERGEYEVA, N.A., red. izd-va; BYKOVA,
V.V., tekhn. red.

[What are ore deposits, where and how should prospecting be
conducted] Chto takoe rudnye mestorozhdeniia, gde i kak ikh
iskat'. Izd.2. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po
geol. i okhrane nedr, 1959. 70 p. (MIRA 14:8)
(Ore deposits)

SCV/132-59-1-17/18

AUTHORS: Vol'fson, F.I., Shatalov, Ye.T., and Yerofeyev, B.N.

TITLE: On the All-Union Conference for the Elaboration of Scientific Bases of Prospecting for Concealed Mineral Deposits
(O vsesoyuznom soveshchanii po razrabotke nauchnykh osnov poiskov skrytogo orudneniya)

PERIODICAL: Razvedka i okhrana neдр, 1959, Nr 1, pp 59-62 (USSR)

ABSTRACT: The above mentioned conference was called by the Academy of Sciences of the USSR and the Ministerstvo geologii i okhrany neдр SSSR (Ministry of Geology and Conservation of Mineral Resources), and took place from 18 to 24 November, 1958. Five hundred geologists, representing 25 geological managements, seven sovnarkhozes, 23 scientific-research institutes and five branches of the AS's of the USSR and allied republics, took part in the conference. Opening the conference, Academician A.G. Betekhtin stressed the important task expected of geologists in the next seven years. He also indicated the general trends of the development of the scientific base of prospecting for concealed deposits. P.Ya. Antropov, Minister of Geology

Card 1/3

SOV/132-59-1-17/19

On the All-Union Conference for the Elaboration of Scientific Bases of
Prospecting for Concealed Mineral Deposits

and Conservation of Mineral Resources of the USSR, also spoke on that subject. The conference heard 28 reports on the importance of different criteria and factors in the prospecting for concealed deposits by: O.D. Levitskiy, V.I. Smirnov, F.I. Vol'fson, L.I. Lukin, M.B. Borodayevskaya, N.I. Borodayevskiy, N.V. Petrovskaya, I.I. Ginzburg, V.I. Krasnikov, A.A. Saukov, Academician D.S. Korzhinskiy, P.F. Rodionov, A.P. Solovov, V.Z. Fursov, A.G. Tarkhov, Ye.A. Radkevich, K.F. Kuznetsov, V.S. Kormilitsin, B.P. Sanin, G.F. Yakovlev, A.V. Korolev, P.A. Shekhtman, V.N. Vydrin, G.D. Azhgirey, Ye.F. Burshteyn, V.A. Nevskiy, M.N. Godlevskiy, V.N. Yegorov, P.I. Kasatkin, T.N. Sirotkin, Ya. P. Baklayev, V.P. Loginov, G.F. Chervyakovskiy, I.V. Lepnykh, M.F. Novikov, F.L. Smirnov, P.S. Bernshteyn, A.I. Khazagurov, N.A. Ozerova, V.E. Pavarkova, I.L. Nikol'skiy, V.P. Fedorchuk, L.I. Shabynin, V.S. Koptev-Dvornikov, N.A. Sirin.

Card 2/3

SOV/132-59-1-17/18

On the All-Union Conference for the Elaboration of Scientific Bases of
Prospecting for Concealed Mineral Deposits

Summing up the results of the conference, O.D. Levitskiy, Member-Correspondent of the AS of the USSR, said that the results achieved up to now are far from satisfactory. All concerned must work hard to elaborate new methods and means of prospecting for concealed mineral deposits.

ASSOCIATION: IGEM, Ministerstvo geologii i okhrany nedr SSSR (IGEM and USSR Ministry of Geology and Conservation of Mineral Resources)

Card 3/3

VOL'FSON, F.I.; LUKIN, L.I.; DYUKOV, A.I.; KUSHNAREV, I.P.; PEK, A.V.;
RYBALOV, B.L.; SONYUSHKIN, Ye.P.; KHOROSHILOV, L.V.; CHERNYSHKEV,
V.F.; BIRYUKOV, V.I.; GARMASH, A.A.; DRUZHININ, A.V.; KARAMYAN,
K.A.; KUZNETSOV, K.F.; LOZOVSKIY, V.I.; MALINOVSKIY, Ye.P.;
NEVSKIY, V.A.; PAVLOV, N.V.; ROMENSON, B.M.; SAMONOV, I.Z.;
SIDORENKO, A.V. [deceased]; SOPKO, P.F.; CHEGLOKOV, S.V.; YUDIN,
B.A.; KREYTER, V.M., doktor geologo-mineral.nauk, retsenzent;
KOTLYAR, V.N., doktor geologo-mineral.nauk, retsenzent; GRUSHEVOY,
V.G., doktor geologo-mineral.nauk, retsenzent; NAKOVNIK, N.I., doktor
geologo-mineral.nauk, retsenzent; KUREK, N.N., doktor geologo-mineral.
nauk, retsenzent; LIIGEN'KIY, S.N., retsenzent; SHATALOV, Ye.T., doktor
geologo-mineral.nauk, red.; KRISTAL'NIY, B.V., red.; SERGEYEVA, N.A.,
red.izd-va; GUROVA, O.A., tekhn.red.

[Basic problems and methods of studying structures of ore provinces
(Continued on next card)]

1968

VOL'FSON, F.I.---(continued) Card 2.

and deposits] Osnovnye voprosy i metody izucheniya struktur rudnykh polei i mestorozhdenii. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nadr, 1960. 623 p.

(MIRA 13:11)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii. 2. Moskovskiy institut tsvetnykh metallov i zolota (for Dyukov, Biryukov, Druzhinin, Kuznetsov). 3. Institut mineralogii, geokhimii i kristalloghimii redkikh elementov AN SSSR (for Garmash). 4. Akademiya nauk Armyanskoy SSR (for Karamyan). 5. Baleyzoloto (for Sidorenko). 6. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR (for Malinovskiy, Nevskiy, Pavlov, Chernyshev). 7. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze (for Ronenson). 8. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya (for Samonov). 9. Voronezhskiy universitet (for Sopko). 10. Kol'skiy filial AN SSSR (for Yudin).

(Ore deposits)

VOL'FSON, F.I.; LEZIN, S.I.

Basic structural characteristics of lead-zinc deposits in the
El'brus ore province. Geol. rud. mestorozh. no.1:55-69 Ja-F '60.
(MIRA 13:7)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, minera-
logii i geokhimii AN SSSR.
(Kuban Valley--Lead ores) (Kuban Valley--Zinc ores)

PEK, A.V., VOL'FSON, F.I., LUKIN, L.I.

Studying structures of endogenous ore deposits. Geol. rud. mestorozh. no.4:3-30 JI-Ag '60. (MIRA 13:8)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, i mineralologii geokhimii AN SSSR, Moskva.
(Ore deposits)

BAYMUKHAMEDOV, Kh.N.; VOL'FSON, F.I.; ZAKIROV, T.Z.; KOROLEV, V.A.;
KREYTER, V.M.; KUSHNAREV, I.P.; LUKIN, L.I.; NEVSKIY, V.A.;
NIKIFOROV, H.A.; PEK, A.K.; RUSANOVA, O.D.; SONYUSHEIN, Ye.P.;
CHERNYSHEV, V.F.; SHEKHTMAN, P.A.

Aleksei Vasil'evich Korolev; obituary. Geol. rud. mestorozh.
no.4:134-135 J1-Ag '60. (MIRA 13:8)
(Korolev, Aleksei Vasil'evich, 1897-1960)

AL'TGAUZEN, M.N.; AMIRASLANOV, A.A.; VOL'FSON, F.I.; KREYTER, V.M.;
LEVITSKIY, O.D.; MALINOVSKIY, F.M.

Academician Iosif Fedorovich Grigor'ev; on the 70th anniversary
of his birth. Sov. geol. 3 no. 9:162-165 S '60.
(MIRA 13:11)

(Grigor'ev, Iosif Fedorovich, 1890-)

NASLEDOV, Boris Nikolayevich [deceased]; VOL'FSON, F.I., doktor geol.-
miner. nauk, red.; KOLOSHINA, T.V., red. izd-va; GUROVA, O.A.,
tekh. red.

[Metallogeny of western Tien Shan and Uzbekistan] Metallogeniia
Zapadnogo Tian'-Shania i Uzbekistana. Pod red. F.I.Vol'fsona.
Moskva, Gos. nauchno-tekh. izd-vo lit-ry po geol. i okhrane
nedr, 1961. 328 p. (MIRA 14:6)

(Tien Shan—Ore deposits)
(Uzbekistan—Ore deposits)

VAKHROMEYEV, Sergey Andreyevich; ZAKHAROV, Ye.Ye., red.; VOL'FSON, F.I., red.
BEREZOVSKAYA, L.I., red. izd-va; MAKEYEV, V.I., red. izd-va; IVANOVA,
A.G., tekhn. red.

[Mineral resources, their classification and formation] Mestorozhdenia
poleznykh iskopaemykh, ikh klassifikatsiya i uslovia obrazovaniya. Pod
red. E.E.Zakharova i F.I.Vol'vsona. Moskva, Gos.nauchno-tekhn. izd-vo
lit-ry po gel. i okhrane neдр, 1961. 462 p. (MIRA 14:7)
(Mines and mineral resources)

SMIRNOV, Sergey Sergeyevich, akademik; BETEKHTIN, A.G., akademik, glav.
red.; VOL'FSON, F.I., doktor geol.-min. nauk, otv. red.;
GODOVIKOVA, L.A., red. izd-va; SHEVCHENKO, G.N., tekhn. red.

[Complex metal deposits and metallogeny of eastern Trans-
baikalia] Polimetallicheskie mestorozhdeniia i metallogeniia
Vostochnogo Zabaikal'ia. Moskva, Izd-vo Akad. nauk SSSR, 1961.
506 p. (MIRA 15:1)

(Transbaikalia—Ore deposits)

VOL'FSON, F.I.

Controversial questions on the genesis of sulfide deposits. Geol.
rud.mestorozh. no.5:118-128 S-O '61. (MIRA 14:9)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii AN SSSR, Moskva.
(Sulfides)

S/081/62/000/010/033/085
3168/E180

AUTHORS: Vol'fson, F. I., Kushnarev, I. P., Lukin, A. I.,
Smorchkov, I. Ye., Sonyushkin, Ye. P., Tishkin, A. I.

TITLE: Some problems concerning the formation of hydrothermal
uranium deposits

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 117,
abstract 10C111 (Izv. vyssh. uchebn. zavedeniy. Geol. i
razvedka, no. 2, 1961, 12-24)

TEXT: A geological study of samples from hydrothermal uranium deposits
from various provinces shows that they have many genetic features in
common. The uranium-bearing provinces are characterized by many stages
of magmatism. Uranium mineralization is due to plutonic pockets of
granite magma in the final stage of development. Large-scale chemical
analyses for one of the provinces showed the mean uranium content of the
Early Hercynian magma complex to be $2.2 \cdot 10^{-4}\%$, that of the Middle
Hercynian $4.6 \cdot 10^{-4}\%$ and that of the Late Hercynian $6.3 \cdot 10^{-4}\%$. In each
separate intrusive complex the quantity of uranium is greater in the

Card 1/2

Some problems concerning the ...

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younger rocks. Uranium mineralization occurs during one of the final stages of the hydrothermal process. The principal paragenetic associations of pitchblende are pitch-sulfide, pitch-carbonate, pitch-fluorite and pitch-quartz-pyrites. The first two associations are typical of uranium deposits properly speaking. Uranium can be transported in hydrothermal solutions in tetravalent and hexavalent forms, passing through the stages of true and colloidal solutions. The optimum conditions for the formation of the upper part of uranium deposits are found at 500-700 m from the former surface of the earth with a possible vertical mineralization range of up to 1800 m. Deposition of the ores is accompanied by silicification, chloritization, albitization and sericitization of the enclosing rocks. Albitization is typical of the upper parts of uranium ore-bodies. The temperature at which the ores form is found to be 150-200°C. [Abstracter's note: Complete translation.] ✓

Card 2/2

ARKHANGEL'SKAYA, V.V.; VOL'FSON, F.I., doktor geol.-mineral.nauk,
otv. red.

[Geology of lead-zinc deposits in the Klichka ore region
(eastern Transbaikalia).] Geologiya svintsovo-tsinkovykh
mestorozhdenii Klichkinskogo rudnogo raiona (Vostochnoe
Zabaikal'e). Moskva, 1963. 211 p. Akademiya nauk SSSR.
Institut geologii rudnykh mestorozhdenii, petrografii,
mineralogii i geokhimii. Trudy, no. 93)

VOL'FSON, F.I.; LUKIN, L.I.; ZALESSKIY, B.V.; ROZANOV, Yu.A.

Role of the study of the structures of ore deposits and of the
physicomechanical properties of **rocks in the determination of conditions**
of localization of endogenic ore deposits. Trudy IGEM no.41:5-14
'61. (MIRA 14:8)

1. Laboratoriya struktur rudnykh poley i mestorozhdeniy Instituta
geologii rudnykh mestorozhdeniy, petrografii, mineralogii i
geofiziki ; Laboratoriya fiziko-mekhanicheskikh issledovaniy
gornyykh porod Instituta **geologii rudnykh** mestorozhdeniy, petrografii,
mineralogii i geofiziki.

(Ore deposits)

VOL'FSON, F.I.; FAVORSKAYA, M.A.

In memory of Academician Sergei Sergeevich Smirnov. Izv.
AN SSSR. Ser. geol. 30 no. 10:3-14 0 '65. (MIRA 18:12)

... of the ...
... in different structural stages. I v. AN SSSR, Ser. Min. st. no. 10:
1938, 6, 1-5 (1938, 18:13)

1. Institut geologii rudnykh i silikatov, Moscow, mineralogii
i geokhimi. AN SSSR, Moscow. Submitted May 23, 1955.

SHCHERBAKOV, D.I., akademik; CHUKHROV, F.V.; VOL'FSON, F.I., doktor geol.-min.
nauk; LUKIN, L.I.

Scientific work of Academician Iosif Fedorovich Grigor'ev.

Izv. AN SSSR. Ser.geol. 30 no.11:110-114 N '65. (MIRA 18:12)

1. Chlen-korrespondent AN SSSR (for Chukhrov).

VOL'FSON, F.I.; LUKIN, L.I.

Prospecting for hidden endogenetic mineralization. Razved. i
okh. nedr 31 no.7:1-6 J1 '65. (MIRA 18:11)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralologii i geokhimi AN SSSR.

VLASOV, K.A.; BELOV, N.V.; VOL'FSON, F.I.; GENKIN, A.D.; GINZBURG, A.I.;
LUKIN, L.I.; KORZHINSKIY, D.S.; SALTYSOVA, V.S.; SAUKOV, A.A.;
SOKOLOV, G.A.; SHCHERBAKOV, D.I.; SHADLUN, T.N.

Konstantin Avtonomovich Nenadkevich, 1830-1963; obituary. Geol.
rud. mestorozh. 6 no.1:123-125 Ja-F '64.

(MIRA 17:11)

BRIZGALOV, N.A.; Vol'fson, F.I. . . .

The second edition of the book "Formation conditions of metalliferous and nonmetalliferous deposits by P.M.Tatarinov. Reviewed by N.A.Brizgalov, and F.I.Vol'fson. Zap.Vses.min.cb-va. 94 (MIKA 28:5) no.2:240-247 '66.

18
47
34
Bf1
L 50199-65 EPA(a)-2 /EWT(m)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(c) Fu-4
IJP(c) WWH/ES/JD/WW/JG UR/553.061:546.79
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Batulin, S. G.; Golovin, YE. A.; Zelenova, O. I.; Kashirtseva, M. F.;
Komarova, G. V.; Kondrat'yeva, I. A.; Lisitsin, A. K.; Perel'man,
A. I.; Sindelnikova, V. D.; Chernikov, A. A.; Shmarlovich, YE. M.

Exogenous epigenetic deposits of uranium; formation conditions
(Ekzonennyye epigeneticheskiye mestorozhdeniya urana; usloviya
obrazovaniya). Moscow, Atomizdat, 1965. 321 p. illus., biblio.
Errata slip inserted. 1100 copies printed.

TOPIC TAGS: deposit formation, epigenetic theory, exodiagenetic
deposit, surface uranium accumulation, uranium bituminous deposit,
uranium deposit, uranium, nuclear fuel. 19

PURPOSE AND COVERAGE: This book is intended for readers specializing
in the geology of ore deposits, in particular for those concerned
with atomic raw materials, and also for students of higher educa-
tion institutions. In the book, for the first time in Soviet and
foreign literatures, the epigenetic theory of uranium-deposit
formation is expounded. Many Soviet and foreign source materials

Card 1/4

L-50199-65
AH5014982

13

have been used in this book, and some of the investigations carried out by the present authors are published in this book for the first time. Several names of Soviet scientists working in this field are mentioned. V. A. Uspenskiy collaborated on Ch. X. and M. A. Viselkina on Ch. III. The authors thank A. A. Saukov, deceased, Corresponding Member Academy of Sciences USSR, and F. I. Vol'fson, D. G. Sapozhnikov, V. I. Gerasimovskiy, M. F. Stralov, G. S. Gritsarenko, and I. P. Kushnarev, Doctors of Geologico-Mineralogic Sciences; V. I. Danchev, Candidate of Geologico-Mineralogic Sciences, and N. A. Volokovykh. There are about 12 pages of references of which about 3/4 are Soviet.

TABLE OF CONTENTS [abridged]:

Introduction -- 4

Ch. I. Epigenetic processes in hypergenesis zone -- 9

Ch. II. Chemistry and crystallochemistry of uranium compounds -- 22

Card 2/4

L 50199-65
AM5014982

- Ch. III. Associations of nonoxidized uranium minerals in epigenetic deposits -- 37
- Ch. IV. Uranium in surface and ground waters -- 48
- Ch. V. Uranium in stratal waters -- 57
- Ch. VI. Classification of exogenous uranium deposits -- 83
- Ch. VII. Exodiagenetic deposits (Type 5) -- 113
- Ch. VIII. Deposits of Oxygenous sheet oxidation (Type 6) -- 133
- Ch. IX. Deposits of oxygen-free oxidation (Type 7). Deposits in oil-bearing carbonate rocks -- 180
- Ch. X. Uranium-bituminous deposits in nonmetamorphosed sedimentary rocks -- 215

Card 3/4

L 50199-65

AH5014982

Ch. XI. On surface uranium accumulations in regions with arid climate -- 232

Ch. XII. Zone of oxidation in epigenetic deposits -- 239

Conclusion -- 275

References -- 309

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OTHER: 118

Card 4/4

VINOGRADOV, A.P.; KORZHINSKIY, D.S.; SMIRNOV, V.I.; SHCHERBAKOV, D.I.;
AYDIN'YAN, N.Kh.; VINOGRADOV, V.I.; VOL'FSON, F.I.; GENKIN, A.D.;
DANCHEV, V.I., LUKIN, L.I.; OZEROVA, N.A.; PEREL'MAN, A.I.; REKHARSKIY,
V.I.; SMORCHKOV, I.Ye.; FEODOT'YEV, K.M.; SHADLUN, T.N.; SHIFULIN, F.K.

Aleksandr Aleksandrovich Saukov, 1902-1964; obituary. Geol. rud. mestorozh.
7 no.1:124-125 Ja-F '65. (MIRA 18:4)

VOL'FSON, F.I., doktor geol.-miner. nauk, prof., otv. red.

[Geology of lead-zinc deposits in the Kansay ore zone]
Geologiya svintsovo-tsinkovykh mestorozhdenii Kansaiskogo
rudnogo polia. Moskva, Nauka, 1965. 200 p.
(MIRA 18:6)

1. Akademiya nauk SSSR. Institut geologii rudnykh mesto-
rozhdeniy, petrografii, mineralologii i geokhimii.

KOROLEV, Aleksey Vasil'yevich; SHEKHITMAN, Pavel Aleksandrovich;
VOL'FSON, F.I., retsenzent; YERMAKOV, N.P., red.;
~~SMIRNOVA, Z.A., ved. red.~~

[Structural conditions governing the distribution of
postmagmatic ores] Strukturnye usloviia razneshcheniia
poslemagmaticheskikh rud. Moskva, Nedra, 1965. 506 p.
(MIRA 18:4)

VOLFSON, F.I.; GENKIN, A.D.

Conference on the problem of postmagmatic ore formation held in
Prague. Geol. rud. mestorozh. 6 no.1:113-122 Ja-F '64. (MIRA 17:12)

ORLOVA, A.V.; TOMSON, I.N.; TOMSON, F.I.; LUKIN, L.I.;
SHATALOV, Ye.T., red.

[Lithological and structural factors in the distribution of mineralization in ore regions; basic principles of metallogenetic research and the compilation of metallogenetic and forecasting maps of ore regions] Litologicheskie i strukturnye faktory razmeshcheniia orudneniia v rudnykh raionakh; osnovnye printsipy metallogenicheskikh issledovani i sostavleniia metallogenicheskikh i prognoznnykh kart rudnykh raionov. Moskva, Nedra, 1964. 212 p.
(MIRA 17:12)

VOL'FSON, F.I.

Geologic structures of lead-zinc deposits in the Argun ore
belt. Trudy IGEM no.83:541-550 '63. (MIRA 16:11)

VOL'FSON, F.I.; LUKIN, L.I.; SOKOLOV, G.A.

In memory of Academician Sergei Sergeevich Smirnov. Geol. ~~Mag.~~ ^{Mag.}
mestorozh. no.6:114-116 N-D '62. (MIRA 15:12)
(Smirnov, Sergei Sergeevich, 1895-1947)

VOL'FSON, F.I.; GINZBURG, I.I.; SAPOZHNIKOV, D.G.; SOKOLOV, G.A.;
YANITSKIY, A.L.

Eightieth birthday of B.P. Krotov. Geol.rud.mestorozh. no.5:117-
118 S-0 '62. (MIRA 15:12)
(Krotov, Boris Petrovich, 1882-)

VOL'FSON, F. I. (reader) and DRUZHININ, A. V.

"Patterns of Distribution of Ore Fields in Different Structural-Facies
Zones of East Zabaykal'ye"

report presented at the First All-Union Conference on the Geology and
Metallurgy of the Pacific Ocean Ore Belt, Vladivostok, 2 October 1960

So: Geologiya Rudnykh Mestorozhdeniy, No. 1, 1961, pages 119-127

VOL'FSON, F.I.; LUKIN, L.I.; NEVSKIY, V.A.; PEK, A.V.; SHEKHITMAN, P.A.

"Prospecting for mineral deposits" by V.M. Kreiter. Reviewed
by F.I. Vol'fson and others. Sov.geol. 4 no.12:133-137 D '61.
(MIRA 15:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralologii i geokhimii.

(Prospecting)
(Kreiter, V.M.)

SMIRNOV, Sergey Sergeyevich, akademik; BETEKHTIN, A.G., akademik,
glav. red.; VOL'FSON, F.I., doktor geol.-min. nauk, otv.
red.; GODOVIKOVA, L.A., red. izd-va; DOROKHINA, I.N.,
tekhn. red.

[Ore deposits and metallogeny of eastern regions of the U.S.S.R.]
Rudnye mestorozhdeniia i metallogeniia vostochnykh raionov SSSR.
Moskva, Izd-vo Akad. nauk SSSR, 1962. 357 p. (MIRA 15:9)
(Siberia, Eastern Ore deposits)

~~VOL'ESON, Fedor Iosifovich~~; LUKIN, Leonid Ivanovich; SERGEYEVA, N.A.,
red. izd-va; BYKOVA, V.V., tekhn. red.

[What are ore deposits, where and how to search for them] Chto
takoe rudnye mestorozhdeniia, gde i kak ikh iskat'. Izd.3.,
perer. Moskva, Gosgeoltekhizdat, 1962. 77 p. (MIRA 15:12)
(Ore deposits) (Prospecting)

507/5077

PHASE I BOOK REVISIONS

U.S.S.R. Ministerstvo svyazi. Tekhnicheskoye upravleniye

Novaya apparatura elektrosvyazi i informatsionnyy sbornik. (New Electro-Communication and Power Supply Equipment; Collection of Information) Moscow, Svyaz'izdat, 1959. 100 p. (Series: Tekhnika svyazi) 13,500 copies printed.

Resp. Ed.: V.A. Lipinski; Eds.: Ye.S. Sorokina and M.M. Mandrabin; Tech. Ed.: B.P. Karabikova.

PURPOSE: This collection of articles is intended for technical personnel of the Ministry of Communications USSR and its subordinate telecommunication establishments.

COVER: The articles in this collection describe various new pieces of Soviet equipment used in electrical communications systems. These include: broadcast studio equipment, mobile radio amplifiers, transformers, cable racks, converters, rectifiers, and switchboards. No personalities are mentioned. References accompany the articles in footnotes.

Meier, Ch.M., and B.K. Baranovsky. A.G./Ch. "Walking Clock" Unit This device provides telephone time service. The authors describe its principle of operation, and the block diagram of the unit 24

Meier, Ch. M. 77 - 200 Line Transformer with Lightning Arrestor. This power transformer is designed for operation with overhead transmission lines of wire broadcasting systems. The author describes the diagram and design of the transformer 31

Philippov, V.N. Subscribers Telegraph Station of the AZL-M Low Capacity System This station is designed for installation in oblast or rayon communication centers of the subscribers' automatic telegraph system. Its capacity is 10 subscribers' installations and 3 voice-frequency channels 34

Rud, V.D. VTS Lead-In Cable Cabinet Racks The author lists a variety of racks for connecting balanced cables of varying capacity. A table indicates the types of mounting plates for each rack. The author also describes circuit diagrams and operation of the rack assemblies. 41

Philippov, V.N. VS-80 Lead-In Rack The author briefly describes the structure and operation of this rack, which serves for connection and communication of communication cables and over-head lines, and for protection of station equipment. 46

Proskurya, M.V. G.A. Volition and P.D. Shonhenkov. Constant Voltage Direct Current Converter with Transistor Triodes These converters provide power supply for communication equipment by means of a single battery. The article also describes converter operating principle, advantages and disadvantages, field of application and components. The results of experiments with 3 types of converters are shown in a table. 49

Golubev, L.S. VS-36/50 Rectifier Assembly The rectifier serves as a power supply for equipment used in intra-rayon and intra-oblast telecommunication and in dial telephone systems. The author gives the circuit diagram and design of the assembly. diagram and structural details of the new board. 50

Konstantinova, L.S. DPU-1 Combined Switchboard The switchboard connects local subscribers among themselves and connects long distance lines with local telephone network subscribers and with those of the automatic telephone system. The article describes circuit diagrams of various combinations of connections, structural details of the components and the assemblies as the whole. 56

Vigdorich, M.M. KSA-4 Drilling Rig The rig drills the holes for overhead line poles. The author describes the functional diagram, design, and operation of the assembly. 66

AVAILABLE: Library of Congress

507/5077

VOL'FSON, G.A.; BRUD, V.G., starshiy inzhener otдела.

Tester lead-in and lead-in posts for regional telecommunication
offices. Vest.sviazi 16 no.1:6-9 Ja '56. (MLRA 9:5)

1. Nachal'nik otдела TSentral'nogo konstruktorskogo byuro (for
Vol'fson).

(Telegraph lines)

VOL'FSON, G. G.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Foods

Vitaminization of milk and milk products with ascorbic acid. S. M. Bessonov and G. G. Vol'fson (Food Inst., Acad. Med. Sci. U.S.S.R., Moscow). *Voprosy Pitaniya* 12, No. 5, 59-66 (1953). Enrichment of milk and milk food products for children with up to 10 mg. % ascorbic acid does not affect taste quality nor hasten curdling of the casein on heating. Storage of the enriched milk at 4-6° for 20 hrs. does not cause an appreciable loss of the vitamin. Enrichment of milk soups with up to 15 mg. % ascorbic acid does not spoil the taste qualities. Storage of hot enriched soups leads to loss of the vitamin; after 1 hr. at 65-75° the loss is 10-34%, after 2 hrs. 12-44%. The stability of the vitamin seems to increase with an increase of concn. in milk soup; this is especially pronounced at the 15 mg. % level. G. M. Kosnagoff

(3)

9

SPIVAK, M.Ya.; ARGUDAYEVA, N.A.; NABIYEV, E.G.; CHISTOVICH, G.N.;
RIVLIN, M.I.; SEMENOV, M.Ya.; KRUGLIKOV, V.M.; SHAL'NEVA, A.M.;
TITROVA, A.I.; RAYKIS, B.N.; MILYAYEVA, Ye.N.; BRUDNAYA, E.I.;
GODINA, I.F.; VOL'FSON, G.I.; SOSONKO, S.M.; KOLEJINSKAYA, L.A.;
VYSOTSKIY, B.V.; MALYKH, F.S.; MIROTVORTSEV, Yu.I.; SYCHEVSKIY,
P.T.; GOPACHENKO, I.M.; KARPITSKAYA, V.M.; FETISOVA, I.A.;
MARTYNYUK, Yu.V.; EMDINA, I.A.

Annotations. Zhur. mikrobiol., epid. i immun. 40 no.3:128-131
Mr '63. (MIRA 17:2)

1. Iz Kemerovskogo meditsinskogo instituta i Kemerovskoy
klinicheskoy bol'nitsy No.3 (for Spivak, Argudayeva). 2. Iz
Kazanskogo instituta usovershenstvovaniya vrachey imeni
Lenina (for Nabyev). 3. Iz Leningrad'skogo kozhnogo dispansera
No. 1 (for Chistovich, Rivlin). 4. Iz Rostovskoy oblastnoy
sanitarno-epidemiologicheskoy stantsii (for Semenov). 5. Iz
Stavropol'skogo instituta vaktsin i syvorotok (for Kruglikov,
Shal'neva, Titrova, Raykis). 6. Iz Kuybyshevskogo instituta
epidemiologii, mikrobiologii i gigiyeny i Tsentral'nogo insti-
tuta usovershenstvovaniya vrachey (for Milyayeva). 7. Iz
Vsesoyuznogo nauchno-issledovatel'skogo instituta zhelezn-
dorozhnoy gigiyeny Glavnogo sanitarnogo upravleniya Minis-
terstva putey soobshcheniya i Detskoy polikliniki st. Lyublino

(Continued on next card)

SPIVAK, M.Ya.----- (continued) Card 2.

Moskovskoy zheleznoy dorogi (for Brudnaya, Godina). 8. Iz Vrachebno-sanitarnoy sluzhby Severnoy zheleznoy dorogi (for Vol'fson, Sosonko, Kolesinskaya). 9. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny i Primorskoy krayevoy protivochumnyy stantsii (for Vysotskiy, Malykh, Mirotvortsev, Sychevskiy, Gopachenko). 10. Iz Yaroslavskogo meditsinskogo instituta (for Karpitskaya). 11. Iz Aralmorskoy protivochumnyy stantsii (for Fetisova). 12. Iz L'vovskogo instituta epidemiologii, mikrobiologii i gigiyeny (for Martynyuk, Endina).

VOL'FSON, G.I.

~~Source: [illegible]~~

Roman Sergeevich Chetyrkin. Gig.1 san. no.5:39-42 My '54. (MLRA 7:5)

1. Iz Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.
(Chetyrkin, Roman Sergeevich, 1797-1865)

BELYAYEV, A.I.; FIRSANOVA, L.A.; VOL'FSON, G.Ye.; LAZAREV, G.I.

Effect of cathodic current density and the cryolite relation
of electrolytes on the current efficiency in aluminum production.
Izv. vys. ucheb. zav.; tsvet. met. 4 no.5:117-122 '61. (MIRA 14:10)

1. Krasnoyarskiy institut tsvetnykh metallov i Volkhovskiy
aluminiumevyy zavod.

(Aluminum—Electrometallurgy)

ACCESSION NR: AT4001237

S/3031/63/000/035/0101/0107

AUTHORS: Belyayev, A. I.; Firsanova, L. A.; Vol'fson, G. Ye.;
Lazarev, G. I.; Pal'chikov, A. I.

TITLE: Obtaining ultrapure aluminum by distillation through
subfluoride in a pilot unit

SOURCE: Gosudarstvenny*y institut tsvetny*kh metallov. Sbornik
nauchny*kh trudov. Moscow, no. 35, 1963, 101-107

TOPIC TAGS: ultrapure aluminum, ultrapure aluminum production,
ultrahigh purity metal, ultrahigh purity metal production, ultrahigh
purity aluminum, ultrahigh purity aluminum production

ABSTRACT: Apparatus for the production of ultrapure aluminum by
distillation via the hypofluoride, developed at the Institut
tsvetny*kh metallov im. M. I. Kalinina (Institute of Nonferrous
Metals) by A. I. Belyayev and L. A. Firsanova (Trudy Mintsvetmet-
zoloto im. M. I. Kalinina, no. 33, 1960) is described briefly. In
this method the purified aluminum is brought in contact with vapor-

Card

1/12

ACCESSION NR: AT4001237

ized aluminum fluoride at 1050° and residual pressure 10^{-1} -- 10^{-2} mm Hg. The produced aluminum hypofluoride is decomposed into pure aluminum and aluminum fluoride which is returned to the cycle. During the course of the trials of the aluminum distillation technology, conditions were found under which large aluminum ingots of specified shape can be produced in the condenser, with simultaneous production of the return condensate ($Al + AlF_3$ with small amount of disperse aluminum). Tests with the pilot plant have shown the possibility of producing by this method superpure aluminum (99.999%) in amounts up to 1 kg a day. The aluminum obtained in the pilot plant was found suitable for production of semiconductor rectifiers, since the aluminum produced from it has less than 0.0001% Fe, 0.0006% Mg, and 0.0001% Cu. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Gosudarstvennyy institut tsvetnykh metallov (State Institute of Nonferrous Metals)

Card 2/12

22799

S/136/61/000/005/002/008
E073/E535

18.3100A also 1087

AUTHORS: Belyayev, A.I., Firsanova, L. A., Vol'fson, G.Ye.
and Katon, Ya. Sh.

TITLE: On the Problem of Interaction of Barium Chloride with
Cryolite Melts and its Influence on the Technology of
Electrolytic Refining of Aluminium

PERIODICAL: Tsvetnyye metally, 1961, No.5, pp.43-45

TEXT: In electrolytic refining of aluminium by means of the
three-layer method, an electrolyte is used consisting of barium
chloride, cryolite, aluminium fluoride and sodium chloride.
Chemical analyses of electrolytes reveal the presence in the
electrolytes of barium fluoride in quantities reaching 17 to 18%.
This indicates interaction in such melts of barium chloride with
the fluorides, for instance in accordance with the reaction:



The results are given of analyses of the electrolytes from baths
for electrolytic refining of Al with various cryolite ratios,
Table 1. (K.o. - cryolite ratio; composition of the electrolyte,
Card 1/4

On the Problem of Interaction ...

S/136/61/000/005/002/008
E073/E535

wt.%). It can be seen that with decreasing cryolite ratios, from 1.94 to 1.33 (i.e. with increasing AlF_3 content), the content of BaF_2 increases from 1.89% to 17.31%. According to the reaction, Eq.(1), in addition to BaF_2 , volatile AlCl_3 forms, which leads to a partial loss of Cl. For the purpose of verifying the possibility of the reaction expressed by Eq.(1), synthetic mixtures of salts were produced with cryolite ratios between 1 and 3 containing 3 to 60 wt.% BaCl_2 . This mixture was maintained in the molten state for 1 hour at 1000°C and then rapidly cooled and analysed chemically for the contents of Na, Al, Ba and Cl. From the analytically determined Ba and Cl contents, the respective content of BaCl_2 was calculated and these values were compared. A plot is made of the analytically determined BaCl_2 content (% based on the % of Cl₂ in the melt) as a function of the BaCl_2 content in the charge for cryolite ratios (K.o.) of 2.8 to 1.0 (the uppermost line applies to the initial BaCl_2 content in the charge). The results show that the reaction expressed by Eq.(1) does indeed take place and leads to an accumulation of BaF_2 in the electrolyte. This is brought about by an increase in the AlF_3 content

Card 2/4

22799

On the Problem of Interaction ... S/136/61/000/005/002/008
E073/E535

of the melt, i.e. by a decrease in the cryolite ratio. The following conclusions are arrived at:

1. Considerable interaction was observed in melts with cryolite ratios below 2, whereby as a result of this interaction BaF_2 forms which has an unfavourable influence on the properties of the melt.
2. To improve the operation of industrial baths in electrolytic refining of Al, the cryolite ratio must not drop below 1.7.
3. It is necessary to develop a rapid method of analysis of the electrolyte which is applicable to electrolytic refining of Al for the purpose of systematic checking of the composition and maintaining an optimum cryolite ratio. There are 1 figure and 2 tables.

ASSOCIATIONS: . Institut tsvetnykh metallov imeni M. I. Kalinina
(Institute of Nonferrous Metals imeni M.I.Kalinin) ✓
(Belyayev and Firsanova).
Volkhovskiy alyuminiyevyy zavod (Volkhov
Aluminium Works) (Vol'fson and Katon)

Card 3/4

BELYAYEV, Anatoliy Ivanovich; FIRSANOVA, Lidiya Alekseyevna; NEKRASOV, B.V., retsenzent; VOL'FSON, G.Ye., inzh., retsenzent; EL'KIND, L.M., red.izd-va; KARASEV, A.I., tekhn.red.

[Monovalent aluminum in metallurgical processes] Odnovalentnyi aliuminii v metallurgicheskikh protsessakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959.
141 p. (MIRA 12:10)

1. Chlen-korrespondent AN SSSR (for Nekrasov).
(Aluminum--Electrometallurgy) (Chemistry, Metallurgic)

1-13525-65

ENG(j)/ENP(e)/ENT(m)/EPE(c)/EPR/EMP(t)/EMP(b) Pr-4/Ps-4 JD/
8/0136/61/000/001/0047/0054

ACCESSION NR: AP4011287 NW/NH

AUTHOR: Vigdorovich, V. N.; Krapukhin, V. V.; Chernomordin, I. F.; Vol'fson, G. Ye.; Lazarev, G. I.; Pal'chikov, A. I.

TITLE: Conditions for obtaining high-purity aluminum by zone refining

SOURCE: Tsvetnyye metally*, no. 1, 1964, 47-54

TOPIC TAGS: aluminum, aluminum refining, zone refining, high purity aluminum, aluminum zone refining

ABSTRACT: Experiments were conducted on four grades of aluminum: A3000 (0.003% Fe; 0.0025% Si; 0.005% Cu -- total impurities < 0.01%); A3000X (0.0015% Fe; 0.0015% Si; 0.001% Cu -- total impurities < 0.004%); intermediate-purity aluminum (0.0016-0.0022% Fe; 0.0013-0.0014% Si; 0.0006-0.0008% Cu); and aluminum purified by the subfluoride distillation method. Impurity content was determined by spectral analysis, and overall estimation of purity by measurement of the residual electrical resistance of the aluminum at the temperature of liquid helium. It was found that high-purity aluminum can be obtained by zone refining, and that resistance heating is better than induction heating when working with graphite boats.

Card 1/2

L 13525-65

ACCESSION NR: AP4011287

and in vacuum. Vacuum degassing of the aluminum lowers the Mg content while reducing the effectiveness of zone refining. Aluminum with a lower content of impurities from the transition metals of the IVa, Va, and VIa groups was obtained by remelting the "dirty" ends of the test samples, with additional zone refining. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM.

NO REF SOV: 003

OTHER: 004

Card

2/2

VOL'FSON, I. B.

AID P - 2412

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 11/33

Authors : Rytslin, A. M., Donbass Power System
Blagonadezhdin, V. M., Kuybyshev Power System
Knyazevskiy, B. A., Moscow Power System
~~Vol'fson, I. B., Kirov Power System~~
Musatov, T. P., Donbass Power System
Ioffe, Ye. F., Gor'kiy Power System

Title : Discussions on the volume of instructions and operational documentation for power substations

Periodical : Elek sta 5, 37-43, My 1955

Abstract : The article refers to an article by Eng. G. B. Yakusha published in this periodical (No. 10, 1953) and gives a summarized account of opinions and answers received from readers. The subject of the discussion is the documentation involved in the operation of substations. The need for standard instructions and a decrease in the amount of paper work is stressed by all correspondents.

Institution: None

Submitted : No date

VOL'FSON, I.M., inzh.

Experimental investigation of profile cascades of turbine blading.
[Trudy] IMZ no.6:65-90 '60. (MIRA 13:12)
(Turbines--Aerodynamics)

S/124/61/000/008/014/042
A001/A101

26.2/22

AUTHOR: Vol'fson, I.M.

TITLE: An approximate estimate of the effect of countersinking of blade outlet edges on the end losses of energy in straight cascades of the profiles

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 8, 1961, 32, abstract 8B194 (V sb. "Issled. elementov parvykh i gaz, turbin i osevykh kompresorov. (Tr. Leningr. metallich. z-da, v. 6)", Moscow-Leningrad, Mashgiz, 1960, 101 - 106)

TEXT: The author takes into account approximate additional energy losses connected with the existence of a closed axial gap in annular turbine cascades. The theoretical estimate of these losses is performed for a straight cascade around which flows a potential stream of incompressible fluid with formation of a turbulent boundary layer. The loss coefficient is determined as the ratio of friction force power on the walls of the interblade channel to the power corresponding to kinetic energy of the potential stream flowing through the inter-

JB

Card 1/2

/B

An approximate estimate ...

S/124/61/000/008/014/042
A001/A101

blade channel at the absence of friction forces. Results of comparison with experiments are presented.

L. Naumova

[Abstracter's note: Complete translation]

Card 2/2

S/123/61/000/010/013/016
A004/A104

AUTHORS: Vol'fson, I. M.; Nausov, M. K., and Ushakov, V. I.

TITLE: Remote-controlled coordinator for the static blowing through of the blade profiles

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 10, 1961, 17, abstract 10I134 (V sb.: Issled. elementov parovykh i gaz. turbin i osevykh kompressorov. [Tr. Leningr. metallich. z-da, 6]. Moscow-Leningrad, Mashgiz, 1960, 464-470)

TEXT: The authors describe the coordinator, its mechanical part, the control panel and electric circuit. Service tests showed the necessary control accuracy of the displacements of the devices during the tests (linear displacements ± 0.1 mm, rotary movements $\pm 0.1^\circ$). The system makes it possible to improve the working conditions of the laboratory staff and increase the quality of tests. There are 4 figures.

[Abstractor's note: Complete translation]

Card 1/1

VOL'FSON, I. M.

Lengthening the service life of ties. Put' i put. khoz. 7
no.3:20-23 '63. (MIRA 16:4)

1. Nachal'nik otдела mekhanizatsii sluzhby puti, Leningrad.

(Railroads--Ties)

VOL'FSON, I.M.; YELIZAROV, V.S.; LOPATITSKIY, A.O.; OZERNOV, L.A.;
TRIFONOVA, M.A.

Aerodynamic study of the operation of plane and annular cascades
with TS-2A profiles developed by the Moscow Institute of Power
Engineering. Trudy MEI no.47:31-36 '63. (MIRA 17:1)

VOL'FSON, I.S.; POLYAKOVA, A.I., AL'PIDOVSKAYA, V.G.; FAKHRETDINOVA, L.I.

Present status of the production of hydrocarbon stock in 13 gasoline plants of the middle Volga Valley Council of National Economy. Gaz. delo no.5222-53 '64 (MIRA 17:1)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut.

BERG, G.A.; MASAGUTOV, R.M.; VOL'FSON, I.S.; KIRILLOV, T.S.; CHEKOVINSKIY,
M.I.; KHARITSKAYA, R.Z.

Hydropurification of thermal cracking reflux. Trudy Bash NIINP no.5:
69-77 '62. (MIRA 17:10)

VOL'FSON, I.S.; ARAMYAN, Ye.S.; YUDINTSEVA, I.P.; KHASANOVA, N.A.

Effect of the fractional composition on the rate of the
extraction of aromatic hydrocarbons. Nefteper. i neftekhim.
no. 3:29-30 '64. (MIRA 17:5)

1. Tatarskiy nauchno-issledovatel'skiy institut g. Kazan'.

L 10187-66 EWT(m)/T WE

ACC NR: AP5028472

SOURCE CODE: UR/0286/65/000/020/0046/0046

AUTHOR: Vol'fson, I. S.

ORG: none

TITLE: Method for stabilization of desalinated petroleum. Class 23, No. 175592

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 46

TOPIC TAGS: petroleum, petroleum industry, gasoline, distillation

ABSTRACT: This Author Certificate presents a method for stabilization of desalinated petroleum by preliminary heating in a heat-exchanger and a tubular furnace and passage through a stabilizing column. A vapor spray is created in the stabilizing column by returning part of the petroleum product (after it has been heated in the furnace) to the bottom of the column. To prevent the decomposition of sulfur compounds in the petroleum and to simplify the process, superheated gasoline vapors, tapped off at the 6th, 8th, and 10th tray of the stabilizing column, are used as the returning petroleum product.

SUB CODE: 11/ SUBM DATE: 20Feb64
13

Card 1/1

UDC: 665.54

VOL'FSON, I.S.; ARAMYAN, Ye.S.; DUBOV, A.V.

Obtaining sulfolene. Nefteper. i neftekhim. no. 4:35-37 '64.
(MIFA 17:5)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut,
g. Bugul'ma.

VOL'FSON, I.S.; ARAMYAN, Ye.S.; YUDINTSEVA, I.P.; KHASANOVA, N.A.

Extraction of aromatic hydrocarbons with sulfolane. Khim.i
tekh.topl.i masl 8 no.2:6-9 F '63. (MIRA 16:10)

KOZIK, B.L.; VOL'FSON, I.S.; VOL'F, M.B.; GERMASH, L.I.

Preparation of cymene by the alkylation of toluene. *Khim. i tekhn. topl. i masel.* 6 no.10:9-12 0 '61. (MIRA 14:11)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefiti.

(Cymene)

(Toluene)

(Alkylation)

VOL'FSON, I.S.; TELESHOVA, M.N. Prinimali uchastiye: SHEYKH-ALI, G.A.;
KAMALOVA, R.K.; SHERGINA, E.G.; SHASHINA, A.D.

New oil field in the Tatar A.S.S.R. Khim. i tekhn. topl. i
masel 9 no.5:29-31 5 My'64 (MIRA 17:7)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut.

L 21104-65 EWT(m)/EPF(c)/T Pr-4 WE/RM

ACCESSION NR: AP4049882

S/0318/64/000/003/0029/0030

AUTHOR: Vol'fson, I. S., Aramyan, Ye.S., Yudinseva, I.P., Khasanova, N. A.

TITLE: Effect of fractional composition on the extent of recovery of aromatic hydrocarbons η

SOURCE: Neftepererabotka i neftekhimiya, no. 3, 1964, 29-30

TOPIC TAGS: petroleum refining, aromatic hydrocarbon, gasoline fraction, countercurrent extraction

ABSTRACT: Straight-run gasoline fractions boiling at 62-85, 62-120, 62-150, 85-120, and 120-150C were used in the study. After dearomatizing with oleum until the aromatic compounds were completely eliminated, pure aromatic hydrocarbons were added (benzene, toluene, xylene) so that their total concentration was 30 wt. % of the stock. The content of aromatic hydrocarbons in the stock, raffinate and extract was determined by the dispersion method. A flow diagram of the laboratory assembly with a disk-rotor contactor for counter-current liquid extraction is given. It was found that: (1) as the ratio of solvent to stock increased, the recovery of aromatic hydrocarbons also increased, and (2) for the same ratio of solvent to stock in the extraction of benzene and toluene from

Cont: 1/2

L 21104-65

ACCESSION NR: AP4049882

narrow fractions (62-85C, 85-120C), the recovery of the total as well as individual aromatic hydrocarbons was less than in the case of their extraction from a mixture of the wider 62-120C fraction. Under optimum conditions for benzene and toluene, the absolute recovery of xylene was low; hence it is desirable to remove the benzene-toluene fraction (62-120C) first, and then to proceed with the recovery of the xylene fraction under conditions which are optimum for it. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Tatarskiy nauchno-issledovatel'skiy institut g. Kazan' (Tatar Scientific Research Institute, Kazan)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP, OC

NO REF SOV: 000

OTHER: 000

Card 2/2

ZAUTOVA, A.Ya.; MASAGUTOV, R.M.; VOL'FSON, I.S.; KIRILLOV, T.S.; DOBREYKIN,
V.Ye.

Purifying the reflux of units for thermal cracking on an aluminosilicate catalyst. Trudy Bash NIINP no.5256-68 '62.

(MIRA 17:10)

VOLINSON, I.V., inzh.; USHAKOVA, Ye.S., inzh.

Simplified telecommunication circuit in the operation of substations.

Elek.sta. 28 no.12:80-81 D '57. (MIRA 12:3)

(Telecommunication) (Electric substations)

VOLEBOON, I. V., DEKMAN, S. P.

Certain Peculiarities of Storage of Medical Supplies and Preparation
of Prescription Formulae Under Field Conditions.

VOYENNO-MEDITSINSKIY ZHURNAL (MILITARY MEDICAL JOURNAL), No 3, 1955. p.79

RYTSLIN, A.M., inzhener; ~~BLAGONADEZH~~BLAGONADEZHIDIN, V.M., inzhener; KNYAZEVSKIY, B.A., inzhener; VOL'FSON, I.V., inzhener; MUSATOV, T.P., inzhener; IOFFE, Ye.F., inzhener

Volume of instructions and operating papers for electric substations.
Elek.sta. 26 no.5:37-43 My '55. (MIRA 8:7)

1. Makoyevskiy setevoy rayon Donbassenergo (f. Rytstlin).
2. Elektroseti Knybyshevenergo (f. Blagonadeshdin). 3. VVS Mosenergo (f. Knyazevskiy). 4. VVS Kirovenergo (f. Vol'fson).
5. Stalinskiy setevoy rayon Donbassenergo. 6. Gorenergo (f. Ioffe).
(Electric substations)

VOL'FSON, I.Ye.

"Mathematical theories of planetary motions." by O.Dziobek.
Reviewed by I.E. Vol'fson. Zhur. vych. mat. i mat. fiz.
4 no.5:976 S-O '64. (MIRA 17:12)

VATEL', I.A.; VOL'FSON, I.YE.; YERESHKO, F.I.; LEBEDEV, V.N. (Moscow)

"Some problems of the theory of optimum transfers"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

LUKOV, B.N., prof. (Kuybyshev); PETROV, V.I., dotsent (Moskva);
 PAVLENKO, T.M., aspirant (Moskva); YERMOLAYEV, V.G., prof.
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 YERMOLAYEV, V.G., prof. (Leningrad); KUPRIYANOVA, N.A. (Kazan');
 PETROV, G.I. (Moskva); DOLGOPOLOVA, A.V. (Moskva); SAKHAROV, P.P.,
 prof.; BYKHOVSKIY, Z.Ye., prof.; MIN'KOVSKIY, prof. (Chelyabinsk);
 KHMEL'CHONOK, I.P. (Irkutsk); TEMKIN, Ya.S., prof. (Moskva);
 MIN'KOVSKIY, A.Kh., prof. (Chelyabinsk); MIL'SHTEYN, T.N., doktor
 med.nauk (Leningrad); TRUTNEV, V.K., zaslužhennyy deyatel' nauki,
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 ATKARSKAYA, A.A., prof.; GOL'DFARB, I.V., prof. (Izhevsk);
 PORUBINOVSKAYA, N.M. (Moskva); RUDNEV, G.P., prof.; MOL'FSON, I.Z.,
 prof. (Stalingrad); DOROSHENKO, I.T., prof. (Kalinin);
 ROZENFEL'D, M.O., prof. (Leningrad); SHUL'GA, A.O., prof. (Orenburg);
 MIKHLIN, Ye.G., prof.; TRET'YAKOVA, Z.V. (Moskva); MANUYLOV, Ye.N.,
 prof. (Moskva); DOROSHENKO, I.T., prof. (Kalinin); YERMOLAYEVA, V.G.,
 prof.

Speeches in the discussion. Trudy gos. nauch.-issl. inst. ukha,
 gorla i nosa no.11:79-87,129-146,179-186,233-248,311-333 '59.

(MIRA 15:6)

1. Chlen-korrespondent AMN SSSR (for ADO). 2. Direktor Moskov-
 skogo gosudarstvennogo instituta ukha, gorla i nosa (for Trutnev).
 (OTORHINOLARYNGOLOGY—CONGRESSES)

~~VOL'FSON, I. G.~~ MEL'NIKOV, N. N.

Effect of fillers on the stability of DDT dusts. [Trudy] NIUIF
no.156:64-73 '55. (MLRA 9:10)

(DDT (Insecticide))

VOL'FSON, Il'ya Grigor'evich; ZALGALLER, G.M., inzh., red.; POLIKARPOV, V.F.,
nauchnyy red.; CHERPAK, A.G., nauchnyy red.; PRUDNIKOVA, M.N., red.;
GOMOZOVA, N.A., red.; PANOVA, L.Ya., tekhn. red.

[Sanitary engineering equipment; a catalog] Sanitarno-tekhnicheskoe
oborudovanie; katalog. Pod red. G.M. Zalgallera [Moskva] Gos. izd-vo
lit-ry po stroit. materialam, 1957. 201 p. (MIRA 11:7)

1. Russia(1923- U.S.S.R.) Ministerstvo promyshlennosti
stroitel'nykh materialov.

(Plumbing--Equipment and supplies)

Catalytic transformation of dimeric 1,3-cyclohexadiene.
B. A. Kazanskii and L. G. Volfson. *J. Gen. Chem.*
(U. S. S. R.) **8**, 1685 (1938); cf. *C. A.* **29**, 6221.
Previously it was shown that 3-methylbicyclo[2.2.2]-
octane, though belonging to those bicyclic systems in
which there is no strain, is catalytically dehydrogenated
over platinized charcoal with cleavage of C_2H_2 and CH_2 -
 $CHMe$ and formation of C_6H_6 and $PhMe$. It could be
expected that dicyclohexadiene (I) and its dihydro deriv.
(II), derivs. of bicyclo[2.2.2]octane (cf. Adler and Stein,
C. A. **26**, 5083), would also decomp. in a similar manner
by catalytic dehydrogenation with serv. of H and C_2H_2 and
formation of C_6H_6 . I (cf. Hofmann and Danne, *C. A.*
22, 1240) failed to react on passing it in C_6 , over platin-
ized charcoal at 150° . At $240-5^\circ$ I in CO_2 and H formed
1,4-endoethylenetetrahydronaphthalene (III), m. 63.5° . II
reacts similarly to give III. III remains unchanged by
passing it in CO_2 over the catalyst at $310-15^\circ$. At $340-50^\circ$
it gives a few crystals with a C_6H_6 odor and uncertain m.
p. In all the cases, the reaction gas contained about 93%
H and no unsatd. compds. Chas. Blanc

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<div style="display: flex; justify-content: space-between;"> BC B-II-1 </div> <div style="text-align: center; margin-top: 100px;"> <p>Synthesis of simpler hydroxyalkyldiphenyl compounds. N. N. MAL'SHIKOV and L. G. VOLESOV (Prom. Org. Chem. 1939, 6, 637-638). $\text{C}_6\text{H}_5\text{Ph-OH}$ is heated with alkyl halides in presence of ZnCl_2 to yield 2-hydroxy-3- and -5-mono- and -3:5-di-alkyldiphenyls. R. T.</p> </div>																																																			
<div style="display: flex; justify-content: space-between;"> <div> <p>OPEN</p> <p>MATERIALS INDEX</p> <p>GROUPS</p> </div> <div> <p>ALPHA-11A METALLURGICAL LITERATURE CLASSIFICATION</p> <p>GROUPS</p> </div> <div> <p>GROUPS</p> <p>GROUPS</p> </div> </div>																																																			

Organic insecticides. X. Synthesis of dialkyl disulfides N. S. Mel'nikov and I. G. Ael'tson. *Zhur. Obshchei Khim.* (I. Gen. Chem.) **20**, 2885 (1950), et. C.1. **39**, 201. Several R_2S_2 compds. were prepd. as follows: 0.15 mol. cryst. Na_2S in 15 ml. H_2O was heated with 0.15 mol. S , the soln. dild. with 100 ml. $EtOH$, refluxed with 0.3 mol. RH several hrs., dild. with H_2O , and the disulfides isolated by extn. and distn. The higher members, particularly those with secondary or tertiary attachment S , are poorly stable on distn. Olefin formation is responsible for the poor yields. The products obtained were: (*EtBu*) CH_2S , 50.1%, b_p 130-1°; d₄²⁰ 0.9033, n_D²⁰ 1.4665; (*iso-Bu*) CH_2S , 40.77%, b_p 130-42°, 0.9027, 1.4873; (*iso-Pr*) CH_2S , 12%, b_p 125°, 0.9172, 1.4833; (*CuH*) CH_2S , 17%, b_p 100-71°, 0.9010, 1.4871; (*iso-Pr*) CH_2S , 15%, b_p 137-8°, 0.9147, 1.4880; (*CuH*) CH_2S , 20%, b_p 137-9°, 0.9033, 1.4857; (*CuH*) S , 36%, b_p 185-93°, 0.8772, 1.4775; (*CuH*) CH_2S , 32%, b_p 153°, 0.8933, 1.4819; (*Bu*) CH_2S , 10%, b_p 175-85°, 0.8930, 1.4841; (*iso-1m*) CH_2S , 27%, b_p 108-7°, 0.8925, 1.4810; (*iso-Bu*) CH_2S , 18%, b_p 143-51°, 0.9040, 1.4820; (*iso-Am*) $(iso-Pr)$ CH_2S , 20%, b_p 148-50°, 0.9128, 1.4923; (*iso-Bu*) CH_2S , 44%, b_p 150°, 0.9070, 1.4795; (*CuH*) S , 77%, 0.8907, 1.4813; (*CuH*) CH_2S , 69%, 0.8946, 1.4815; (*Bu*) CH_2S , 10%, 0.9135, 1.4870; (*iso-Bu*) $(iso-1m)$ CH_2S , 10%, b_p 145-50°, 0.8908, 1.4705; (*iso-1m*) CH_2S , 70%, 0.8873, 1.4821; (*CuH*) $CH_2CH_2CH_2CH_2S$, 42%, b_p 175-84°, 0.8905, 1.4810; (*CuH*) CH_2CH_2S , 61%, b_p 190-2°, 0.8940, 1.4811. **XI. Synthesis**

of alkane-sulfonates with isostructure and surface tension

of their aqueous solutions I. G. Volfson and N. N. Mel'nikov. *Ibid.* 2080-92. A no. of new alkam sulfonates were prepd. either by chloromation of the corresponding alkyl sulides in H₂O, followed by hydrolysis of the sulfonyl chlorides, or by oxidation of the disulfides with HNO₃. The latter method gave satisfactory results. The acids were neutralized with KOH or Ba(OH)₂ and the salts from EtOH, and dried over P₂O₅. The Ba salts were metathetically converted to K or Na salts with the carbonates. No further details on prepus. are given. Detn. of the surface tension of aq. solns. showed the lowest tensions for compds. with normal structure, while compds. with the sulfonate group near the middle of the chain were least active. The following values (dynes/cm) were found at 1, 0.5, 0.25, and 0.1% concns., resp.: *n*-C₁₇H₃₅(SO₃K)/Bu 63.1, 60.8, 57.9, 58.9; *iso*-BuCH(SO₃K)/Bu 54.9, 50.5, 63.1, 60.8; MeCH(SO₃K)/C₁₀H₂₁ 57.7, 62.7, 65.7, 67.6; PrCH(SO₃K)/Bu 53.6, 50.9, 60.9, 68.0; C₁₁H₂₃SO₃K 38.8, 62.0, 58.0, 67.1; EtCH(SO₃K)/C₁₀H₂₁ 40.0, 45.1, 50.2, 65.6; EtCH(SO₃Na)/C₁₀H₂₁ 37.6, 42.8, 51.9, 62.6; BuCH(SO₃K), 48.1, 55.3, 63.1, 68.3; *iso*-MeCH(SO₃Na)/Pr 48.3, 55.5, 54.9, 66.4; 64.3, 67.7; *iso*-AmCH(SO₃K)/Pr 48.3, 55.5, 54.9, 66.4; *iso*-BuCH(SO₃K)/Bu 47.2, 53.6, 58.7, 67.9; Me₂CHCH(SO₃K)CH₂CH(SO₃K)Me 40.6, 52.8, 58.8, 64.7; (*iso*-BuCH(SO₃K))₂CH₂CH(SO₃K)Me 40.3, 51.3, 60.5, 64.8; C₁₂H₂₅SO₃K 35.5, 48.7, 57.2; *iso*-BuCH(SO₃K)CH₂CH(SO₃K)Me 40.6, 52.6, 63.8, 64.6; 62.3; *iso*-BuCH(SO₃K)/C₁₀H₂₁ 34.2, 41.5, 45.8, 62.7; BuCH(SO₃K)/C₁₀H₂₁ 31.9, 39.1, 45.1, 50.9. G. M. Kosolapoff

BA

AD - 1
Aliphatic

Organic insecticides. XI. Synthesis of alkyl alkane-sulphonates with an iso-structure, and surface tension of their aqueous solutions. L. G. Valtsen and N. N. Melnikov (*J. gen. Chem. USSR*, 1963, 33, 2069—2072 [U.S. transl., 2163—2165]).—A series of Na or K alkane-sulphonates is prepared from corresponding dialkyl disulphides, either by chlorination in aq. media and hydrolysis of the alkyl sulphochlorides or by HNO_3 oxidation. The oxidation (preferred method) is effected by dropwise addition of the calc. wt. of HNO_3 (4.1-4) to the disulphide, heating for 1 hr. at 100° , neutralisation [KOH or $\text{Ba}(\text{OH})_2$], evaporation, washing with Et_2O , and extraction into, and recrystallised from, EtOH . The

surface tension, γ (dynes/cm.) in 1%, 0.5%, 0.25% and 0.1% solution is as follows for the following sulphonates. *K n-undecyl-3-* (63.1, 66.8, 67.9, 68.9), *K 2-methyl-n-undecyl-4-* (54.9, 60.5, 67.6, 69.3), *K n-octyl-2-* (57.7, 62.7, 65.7, 67.6), *K n-octyl-3-* (59.9, 66.9, 68.0), *K n-nonane-1-* (38.8, 52.0, 58.6, 67.1), *K n-nonane-3-* (40.0, 43.1, 50.2, 65.6), *Na n-nonane-3-* (37.6, 42.8, 53.9, 62.6), *K n-nonane-5-* (46.1, 55.3, 63.1, 68.3), *K 2-methyl-n-octane-3-* (50.2, 58.2, 64.3, 67.7), *Na 2-methyl-n-octane-5-* (44.3, 55.5, 64.9, 68.4), *K 2-methyl-n-octane-4-* (47.2, 53.3, 61.7, 67.9), *K 2 : 6-dimethyl-n-heptane-3-* (46.6, 52.8, 58.8, 64.7), *K 2 : 6-dimethyl-n-heptane-1-* (35.3, 48.7, 57.2, 62.3), *K 2 : 7-dimethyl-n-octane-4-* (46.6, 52.6, 63.6, 64.6), *K 2-methyl-n-decane-4-* (34.2, 41.1, 45.8, 53.7), and *K n-undecane-3-sulphonate* (34.9, 39.4, 45.4, 56.9). In this series, γ decreases with increasing mol. wt.; at higher concn. (1.0%), γ is lowest for the n-alkane compounds with terminal SO_3K groups, and at lower concn. (0.1%), γ is lowest for n-alkane compounds with SO_3K groups near the middle of the chain.
J. D. Bu'Lock.

Sci. Res. Inst. Fertilizers + Insecticides (NIU IF)

Organic Chemistry

CP

Organic insectifuges. X. Synthesis of dialkyl dioul-
ides. N. N. Mel'nikov and L. G. Vol'fon. *J. Gen.*
Chem. U.S.S.R. 20, 2150-61(1960)(Engl. translation).—
See *C.A.* 45, 8400d. XI. Synthesis of alkanesulfonates
with iso structure and surface tension of their aqueous solu-
tions. L. G. Vol'fon and N. N. Mel'nikov. *Ibid.*
2163-5(Engl. translation).—See *C.A.* 45, 8008g.
B. L. M.

VOL'FSON, L. B.

Reaction of hexachlorocyclopentadiene with some unsaturated compounds. L. B. Vol'fson, N. N. Mironov, A. F. Plat, Yu. N. Smozhnev, and G. S. Telfer (S. D. Zelinskii Inst. Org. Chem., Moscow). Doklady Akad. Nauk S.S.S.R. 105: 1252-5 (1955). Heating 47 g. hexachlorocyclopentadiene (I) with 11.7 g. cyclopentene 6 hrs. at 120-3° gave 29.3 g. 1,3,6,7,8,8-hexachloro-1,1'-endomethylene-1,4,5,6,7,8a-hexahydronaphthalene, m. 162-3°. I and 2-methylcyclopentene thus gave 1,3,6,7,8,8-hexachloro-1,1'-endomethylene-1-methyl-1,2,3a,7,8a-hexahydronaphthalene, m. 61-3°. I and 2-methylfuran in 7 hrs. at 70° gave 1,2,3,4,7a-hexachloro-1,1'-endoxy-7-methyl-3a,4,7,7a-tetrahydronaphthalene, m. 175-6°. I and cyclohexene in 30 hrs. at 111° gave 1,3,3,4,9,9-hexachloro-1,1'-endomethylene-1,4,5a,6,7,8-octahydronaphthalene, m. 77°. I and bicyclo[2.2.1]hepta-2,5-diene gave in 25 hrs. at 100° 1,2,3,4,10,10-hexachloro-1,1,5,8-diendomethylene-1,4,5a,6,8a-hexahydronaphthalene (Aldrin), m. 93-5°. I and bicyclo[2.2.1]hept-2-ene in 1.5 hrs. at 150° gave a good yield of 1,2,3,4,10,10-hexachloro-1,1,5,8-diendomethylene-1,4,5a,6,7,8a-octahydronaphthalene, m. 76.5-7°. I and 5-methylbicyclo[2.2.1]hept-2-ene in 11 hrs. at 150° gave a good yield of 1,2,3,4,10,10-hexachloro-1,1,5,8-diendomethylene-6-methyl-1,4,5a,5,6,7,8a-octahydronaphthalene, m. 56-3°. I and 5-ethylbicyclo[2.2.1]hept-2-ene in 13 hrs. at 150° gave 1,2,3,4,10,10-hexachloro-1,1,5,8-diendomethylene-6-ethyl-1,4,5a,5,6,7,8a-octahydronaphthalene, m. 56-8°. the 6-Aur analog, prep. similarly, b.p. 188°, n_D 1.6404, d₄ 1.3604. I and acetylbicyclo[2.2.1]hept-2-ene in 23 hrs. at 95° gave 1,2,3,4,10,10-hexachloro-1,1,5,8-diendomethylene-6-acetoxy-1,4,5a,5,6,7,8a-octahydronaphthalene, m. 172-3°. I and styrene in 3 hrs. at 170° gave 1,2,3,4,7-hexachloro-5-phenylbicyclo[2.2.1]hept-2-ene, m. 73-4°.

G. M. Kosolapoff

M. A. 2001-2

20 copies

VOL'FSON, L.G.; VOLODKOVICH, S.D.; MEL'NIKOV, N.M.; RUBLEVA, I.M.

Organic insectofungicides. Part 24. New method for the preparation
of halo phenyl esters of sulfonic acids. Zhur.ob.khim. 26 no.9:
2579-2581 S '56. (MLRA 9:11)

(Sulfonic acids)

SOV/79-29-2-36/71

AUTHORS: Vol'fson, L. G., Mel'nikov, N. N., Person, A. I.

TITLE: On the Field of Organic Insectofungicides (Iz oblasti organicheskikh insektofungitsidov). XXXIX. The Meltability Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro-benzene Sulfonate (XXXIX. Diagramma plavkosti binarnoy sistemy o- i n-khlorofenil-n-khlorbenzolsulfonator i krioskopicheskiy metod opredeleniya n-khlorofenil-n-khlorbenzolsulfonata)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 526-529 (USSR)

ABSTRACT: One of the most active insectofungicides killing ticks, especially for plants, is n-chloro-phenyl-n-chloro-benzene sulfonate (I), which is known by the terms ether sulfonate, "ovotrane", etc. The commercial preparation usually contains the compound (II), (III) and smaller amounts of phenyl-n-chloro-benzene sulfonate, all of which develop a considerably less intense activity and must be used therefore in high concentrations harmful to plants. Due to the mixture composed of isomeric and related compounds, the determination of the actually active factor in it is very difficult. Up till now, it has

Card 1/3

SOV/79-29-2-36/71

On the Field of Organic Insectofungicides. XXXIX. The Meltability Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro-benzene Sulfonate

not been possible to determine (I) in this technical mixture (Ref 3). In order to attain this aim, the authors tried to start from the physicochemical properties and the cryoscopic constant of compound (I) according to references 4-6, in which pure γ -hexachloro cyclohexane is used as solvent on the analysis of "lindane". For the application of the cryoscopic analysis of (I) the authors investigated primarily the meltability diagram of the binary system n-chloro-phenyl-n-chloro-benzene sulfonate - o-chloro-phenyl -n-chloro-benzene sulfonate and determined the cryoscopic constant of (I), which is equal to 13.40 (according to ten determinations; see table 1 and the figure with the diagram). It was shown that the cryoscopic method can be applied to the analysis of the isomeric mixture and related compounds which are present in the technical preparation (I). Table 2 shows data on the analysis of the ternary system: n-chloro-phenyl-n-chloro-benzene sulfonate, o-chloro-phenyl-n-chloro-benzene sulfonate and 2,4-dichloro-phenyl-n-chloro-benzene sulfonate. For details see the experimental part. There are

Card 2/3

SOV/79-29-2-36/71

On the Field of Organic Insectofungicides. XXXIX. The Melatability Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro-benzene Sulfonate

1 figure, 2 tables, and 9 references, 3 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam
(Scientific Institute of Fertilizers and Insectofungicides)

SUBMITTED: December 28, 1957

Card 3/3

5(3)

SOV/79-29-9-6/76

AUTHORS:

Volodkovich, S. D., Vol'fson, L. G., Kuznetsova, K. V.,
Mel'nikov, N. N.

TITLE:

From the Field of Organic Insectofungicides. XLIII. Synthesis
of α -Oxides by Oxidation of Polycyclic Halogen Derivatives
With Hydrogen Peroxide

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, No 9,
pp 2837 - 2839 (USSR)

ABSTRACT:

Since some of the cyclic α -oxides are strong agents against
insects and mold fungi, the authors oxidized some halogen
derivatives of polycyclic hydrocarbons. To obtain Dieldrin
and Endrin it was first of all necessary to investigate the
oxidation of Aldrin and Isodrin. The two former compounds
were hitherto obtained solely by the oxidation of Aldrin
and Isodrin with organic hydroperoxides (Refs 3-6) or H_2O_2 in
the presence of pervanadic or pertungstic acid (Ref 7). To
obtain the corresponding oxides, the authors oxidized the
halogen derivatives of polycyclic hydrocarbons with 27-30%
hydrogen peroxide solution in 80-99% acetic acid solution;
almost all these halogen derivatives were transformed into

Card 1/2

From the Field of Organic Insectofungicides. XLIII. SOV/79-29-9-6/76
 Synthesis of α -Oxides by Oxidation of Polycyclic Halogen Derivatives With
 Hydrogen Peroxide

α -oxides in good yields. The following compounds recently synthesized by the authors were oxidized: 1,2,3,4-tetrachloro-10,10-difluoro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2-dichloro-3,4,10,10-tetrafluoro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2,3,4-tetrachloro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2,3,4,10-pentachloro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene (Refs 8,9).

α -Oxides were obtained from all of these compounds. Aside from Dieldrin and Endrin, none of the compounds synthesized by the authors are described in publications. It is interesting to note that the yield of α -oxide mainly depends on its water resistance (Table). The insecticide activity of the oxides runs in parallel with the activity of the initial products (of the unsaturated compounds). There are 1 table, 9 references, 6 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers and Insectofungicide Agents)

SUBMITTED: July 17, 1958
 Card 2/2

5.3000

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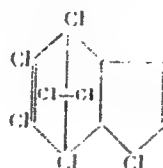
SOV/00-55-1-01-01

AUTHORS: Volodkovich, S. D., Vol'fson, L. G., Kojan, L. M.
Mel'nikov, N. N., Sapozhkov, Yu. N.

TITLE: Concerning the Preparation of Insecticide "Heptaenor"

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, No 1, pp 227-
233 (USSR)

ABSTRACT: "Heptaenor" or 3,4,5,6,7,8-heptachloro-4,7-cycloocta, 1-
ene-3a,4,7,7a-tetrahydronon has the following properties:
white crystals with camphor odor, dissolves well in
organic solvents.



Card 1/3

Hexachlorocyclopentadiene was condensed with cyclo-
pentadiene and 4,5,6,7,8,8-hexachloro-3a,4,7,7a-

Concerning the Preparation of Insecticide
"Heptachlor"

77432
SOV/80-33-1-41/49

tetrahydro-4,7-endomethyleneclon (chlordan) was formed. The latter was chlorinated and heptachlor was obtained (yields are not given). Heptachlor content in the reaction mixture is increased to 70% by chlorination for 30 to 120 minutes. The optimal conditions for the formation of chlordan in CCl_4 are 10% excess of C_5H_6 , at $80-85^\circ$, duration 30-40 minutes. For the chlorination of chlordan, the following conditions are recommended: the presence of activated (at 120° , for 1-2 hours) kieselguhr and a temperature not over 5° . Heptachlor content is about 70%. The yield of heptachlor is determined by the total amount of introduced chlorine and, with certain limits, is independent of the feed rate of chlorine and duration of chlorination. There are 6 figures; and 29 references, 4 Soviet, 16 U.S., 3 German, 4 U.K., 2 French. The 5 most recent U.S. references are: H. Bluestone, Y. A. Tajima, R. E. Lidov, Am. Pat. 2818445; M. Kleinman, *ibid.*,

Card 2/3

Concerning the Preparation of Insecticide
"Heptachlor"

77532
SOV/80-33-1-41/49

2741640; ibid., 2741639; ibid., 2741641; H. Bluestone, R.
E. Lidov, J. H. Knaus, P. W. Hoverton, ibid., 2576666.

ASSOCIATION: Research Institute of Fertilizers and Pesticides
(Nauchnyy institut po udobreniyam i insektofungitsidam)

SUBMITTED: June 3, 1959

Card 3/3

5.3400,5.1320

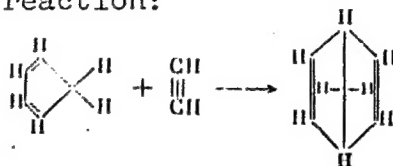
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TITLE: Concerning the Isolation of Aldrin and Dieldrin

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ABSTRACT: The article describes the synthesis of aldrin
and dieldrin based on information gathered from
foreign patent literature and on the authors' studies
of the basic reaction of hexachlorocyclopentadiene with
bicyclo-(2,2,1)-heptadiene-2,5. The latter was
synthesized in a continuous flow installation, accord-
ing to the reaction:

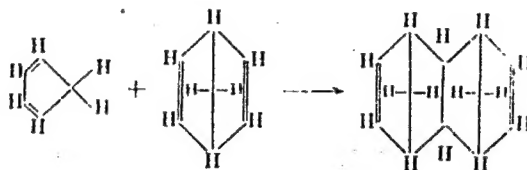


Card 1/6

Concerning the Isolation of
Aldrin and Dieldrin

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SOV/80-33-2-34/52

The optimum conditions for the above condensation of cyclopentadiene with acetylene were: molar ratio 1:1.1 to 1:2; temperature 345°C ; pressure 20 atm. The yield of bicycloheptadiene under those conditions was about 48% and dropped sharply with rising temperature. The spent gas contained 95-97% acetylene and could be recycled. Investigation of the thermal stability showed that bicyclo-(2,2,1)-heptadiene-2,5 remained unchanged at 290°C , but under the conditions of the reaction it reacted with one cyclopentadiene molecule:



At 340°C and above, bicycloheptadiene was isomerized into cycloheptatriene; at 390° and 8 atm the extent of isomerization reached 20%, and a small amount of

Card 2/6